

MINUTES OF THE 6th CPDAC MEETING
HELD AT PONDICHERRY ON 7TH APRIL, 2004

The 6th Meeting of the "Coastal Protection and Development Advisory Committee" (CPDAC) was held at Pondicherry on 7th April 2004, under the Chairmanship of Shri M.K. Sharma, Member (River Management), CWC and ex-officio Additional Secretary, Govt. of India.

The meeting was preceded by inaugural function where Chief Secretary, Pondicherry, was the Chief Guest and the function was presided over by the Chairman, CPDAC. Shri P.P. Srinivasan, Chief Engineer, Pondicherry welcomed Shri R. Padmanaabhan, Chief Secretary, UT of Pondicherry, Shri M.K. Sharma, Chairman, CPDAC, Shri S.C. Awasthy, Member-Secretary, CPDAC and other participants. After presentation of bouquets and lighting of traditional lamp, gathering was addressed by the Member-Secretary, CPDAC, Chairman, CPDAC and the Chief Guest. The presidential address was given by Shri M.K. Sharma, wherein he discussed erosion problem in India and emphasized the need to explore and adopt the latest environment friendly technologies. He also informed in brief participants regarding National Coastal Protection Project (NCP), which is under consideration of Central Government and the Central Sponsored Scheme (CSS), which has been approved by the Central Government. Chief Secretary, Pondicherry, in his speech discussed erosion problem in Pondicherry and advocated cost effective and environment friendly technology. He quoted example of coastal protection technique adopted in Bangladesh. He mentioned about the Central Sponsored Scheme (CSS) of UT of Pondicherry, which has recently been approved by the Govt. of India. He wished the 6th CPDAC meeting a grand success. Thereafter Mementos were presented on behalf of the Pondicherry Govt. to the dignitaries. This was followed by vote of thanks by Sh. R. Sundarraju, S.E., PWD.

Before taking up the agenda items of the CPDAC meeting, Chairman, CPDAC, desired to review the mandate of the CPDAC. Detailed discussions took place on the functions of the CPDAC given in the Ministry of Water Resources resolution dated 17th April 1995. A copy of resolution had already been circulated to all the members of CPDAC along with agenda papers.

Functions of Coastal Protection & Development Advisory Committee (CPDAC)

Function (i) To organise a co-ordinated programme of collection, compilation, evaluation and publication of data relating to various natural phenomena in coastal processes, which affect the coastline, through Coastal Engineering Research Centre and other State organisations.

There is a provision for bringing out an Atlas, which is to be prepared by the Space Application Centre (SAC), Ahmedabad. Chairman, CPDAC, asked representative of Space Application Centre whether Coastal Atlas fulfilling the objective of function (1). Shri A.S. Rajawat, SAC, informed CPDAC that preparation of Atlas has already been discussed in the previous meeting. SAC have a

comprehensive database for the coastline as well as the changes along the coast. The contents of the Atlas have been discussed in detail. Shri A.S. Rajawat informed that a digital data base (GIS based) would be prepared, which will be utilized to provide information about the shore line changes, land use and landforms changes, etc. Socio-economic data should also be a part of the Atlas. Maps can be brought out as and when required. Updating will be easier in digital database. A-3 size maps will be prepared.

Shri I.Z. Poonawala, Jt. Director, CW&PRS mentioned that collection of coastal data is required for suggesting coastal protection works. Nodal officers from maritime States/UTs have been appointed. Nodal officers should send data regularly to CWPRS as per the prescribed format. Shri I.Z. Poonawala informed that a scheme for central data bank has been approved, which will be maintained by the CW&PRS.

Shri M.S. Patel, Secretary, NWR&WS Deptt., Gujarat, mentioned that validation of data is also very important. He suggested to replace word 'Coastline' by 'Coastal zone'. He also suggested to include natural phenomena of rivers in tidal zone in the function.

Shri B.M. Rao, Additional Secretary & Chief Engineer, NWRWS & Kalpasar Deptt, Gujarat, said that there is no co-ordination between the Centre and the States regarding data collection and sharing of data with one another. He suggested to set up coordination cell for coastal data. Representative of CW&PRS informed that CW&PRS is already in touch with the CPDAC and other States for this purpose.

Function (ii) To organise general investigation, studies and research with the help of Central and State Coastal Engineering Research Institutions.

Chairman, CPDAC, suggested to bring out a newsletter on research activities in coastal engineering. Dr. T.G. Antony Balan, Chief Engineer (C&SR), CWC, suggested to contact universities/research organisations involved in research work. He also suggested to explore websites to retrieve information on research activities. This suggestion was appreciated by the Chairman, CPDAC.

Function (iii) To lay down principles in construction techniques of coastal protection measures for the guidance of State Authorities.

Shri I.Z. Poonawala, informed that the mandate of CW&PRS is limited to provide solutions to problems referred by the States. The concerned State authority has to take up the other part, like tendering, execution, etc. Shri B.M. Rao, Additional Secretary & Chief Engineer, NWRWS & Kalpasar Deptt, Gujarat, suggested CW&PRS could have a list of construction companies, which are well qualified in the construction works. Shri Poonawala informed the Committee that they remain in touch with the State authorities to discuss many items, like construction material available with the States before a solution is found. CW&PRS can suggest alternative designs also. But monitoring and supervision by the CW&PRS during the construction is not possible. Shri M.S. Patel, Secretary,

NWR&WS Deptt., Gujarat, suggested that some booklets/publications on construction techniques can be published and maintained by the CPDAC which can be used by the States. Chairman said that NIO, Goa, may be requested to supply the copies of the manual, which can be circulated to all the maritime States/UTs, and NIO may be asked to update the manual, if required.

Chairman, CPDAC suggested to form a sub-committee for bringing out a manual for execution of coastal protection works. Sh. S.C. Awasthy, Member-Secretary, CPDAC & Chief Engineer (P&D), CWC, suggested to appoint some consultant for preparation of manual and get it approved by sub-committee. The sub-committee may include following members:

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| 1. Director, Coastal Erosion Directorate, CWC | - Convenor |
| 2. Director, Beach Erosion Directorate, CWC | - Member-Secretary |
| 3. Representative of NIO | - Member |
| 4. Jt. Director, CWPRS | - Member |
| 5. Representative from Gujarat | - Member |
| 6. Representatives from the other States | - Member |
- who are involved in execution of works.

Function (iv) To review the performance of the works carried out by States and evolve improved design techniques based on such experience from time to time.

Capt. Mohan, Director (Ports), Karnataka said that designs are provided by the CW&PRS, and it is being implemented by the State authorities accordingly. The States sometime need improvement in the design modifications, which can be provided by the CW&PRS. Representative of CWPRS informed that monitoring work is generally performed by the State agencies. The monitoring report should be brought to the knowledge of CPDAC/CWPRS. Sh. A. Muralidharan, Research Officer (WR), Planning Commission emphasized the need of performance evaluation of anti sea erosion works. Shri M.S. Patel, Secretary, NWR&WS Deptt., Gujarat, expressed the necessity of guidelines for performance evaluation of anti sea erosion works.

Chairman, CPDAC suggested to form a sub-committee for performance evaluation of coastal protection works. Sub-committee may visit sites in maritime States/UTs and submit its report. The sub-committee may include following members:

- | | |
|---|--------------------|
| 1. Chief Engineer (C&SRO), CWC | - Convenor |
| 2. Jt. Director, CWPRS | - Member |
| 3. Director, Beach Erosion Directorate, CWC | - Member-Secretary |
| 4. SAC, Ahmedabad | - Member |
| 5. Representative of the concerned State | - Member |

Sh. I.Z. Poonawala informed that CW&PRS has been conducting various technical training courses for the State engineers, wherein designs aspects and guidelines are explained.

Function (v) To inter-act with international agencies engaged in the work of coastal protection and technology transfer in the field of coastal protection.

Sh. I.Z. Poonawala suggested to interact with international agencies engaged in coastal protection works through internet. Chairman suggested that CW&PRS can present new technology or latest developments taking place in this field in the CPDAC meetings in future.

Function (vi) To identify the coastal zone to be developed behind the coastal protection works with the help of State Governments.

It was felt in the meeting that the proposed Coastal Atlas can take care of this function.

Function (vii) & (viii)

- (vii) To identify the development potential in various techno-economic activities and advise the concerned State Govts. to prepare programme for development.
- (viii) To draw up long-term and short-term plans for coastal protection and development of the coastal zone.

CPDAC proposed to club together function (vii) & (viii) since both the functions are more or less same in nature.

The coastal zone management plan of each State/UT comes under the purview of Union Ministry of Environment and Forests (MOEF). Since no one from MoEF attended the meeting, this topic could not be discussed.

It was decided to constitute a sub-committee to review short term and long term plans (Master Plan) for coastal protection. The sub-committee may include following members:

- | | |
|---|--------------------|
| 1. Chief Engineer (P&D), CWC | - Convenor |
| 2. Jt. Director, CWPRS | - Member |
| 3. Director, Beach Erosion Directorate, CWC | - Member-Secretary |
| 4. SAC, Ahmedabad | - Member |
| 5. NIO, Goa | - Member |
| 6. Representative of GSI | - Member |
| 7. Representative of MoEF | - Member |
| 8. Representative of the concerned State | - Member |

Representative of Gujarat proposed to take up preparation of plan for Gujarat in the first instance.

Function (ix) & (x)

- (ix) To appraise and recommend various coastal protection and development works for inclusion in State plans.
- (x) To arrange effective and timely monitoring of the coastal protection & development projects.

Function (ix) & (x) were discussed and apprised to the participants in the meeting.

Function (xi) To review the action plan for rehabilitation and resettlement of the coastal development affected people and monitor the progress on rehabilitation and resettlement.

Additional Secretary & Chief Engineer, NWRWS & Kalpasar Deptt, Gujarat, suggested to remove this function from CPDAC mandate.

Before discussing the agenda items of the CPDAC meeting, a brief presentation was made by Shri J.C. Iyer, Director, Beach Erosion, CWC, Cochin, giving the details of coastline of States, coastal problems, and remedial measures taken by the States.

MINUTES OF THE 6TH CPDAC MEETING

6.1 CONFIRMATION OF THE MINUTES OF THE 5th MEETING

Minutes of the 5th meeting of CPDAC held on 26th September 2002, at Mangalore (Karnataka), were confirmed.

6.2 TO SORT OUT INCONSISTENCIES IN COASTAL LENGTHS FROM VARIOUS SOURCES.

Chairman, CPDAC, observed that there is a marked difference in the length of coast indicated by the office of Chief Hydrographer, Govt. of India, Dehradun, and some of the States, particularly, Gujarat. Shri M.S. Patel, Secretary, NWRWS Deptt, Gujarat, informed that there is a huge difference in the coastal length of Gujarat as mentioned by the NHO, and the Gujarat State because the technique of measuring the coastal length as used by the Gujarat State is different which is being adopted by the National Hydrographic Office (NHO). In this connection, Cdr. Inda, informed that the hydrographic surveys in the country are carried out by National Hydrographic Office following the laid down International Hydrographic Organisation's rules and procedures for measuring the coastline and then compared with the topographic maps prepared by Survey of India.

Chairman, CPDAC, requested delegates from Gujarat and other maritime States to approach National Hydrographic Office (NHO) and reconcile the issue of variation in coastal length.

(Action: Maritime States & UTs / NHO)

6.3 TO ORGANISE A COORDINATED PROGRAMME OF COLLECTION, COMPILATION, EVALUATION AND PUBLICATION OF DATA RELATING TO VARIOUS NATURAL PHENOMENON AND COASTAL PROCESSES, WHICH AFFECT THE COASTLINE.

Shri I.Z. Poonawala, Jt. Director, CW&PRS, Pune, informed that it is the responsibility of the nodal officers of maritime States to collect the data and send to CW&PRS for compilation. Chairman, CPDAC, emphasized the need for creation of a data bank. Representative of Tamil Nadu informed the Committee that they have a separate department for data collection and 30 years of data is available. Shri J.C. Iyer, Director, Beach Erosion, CWC, Kochi, informed the Committee that States of Kerala and Tamil Nadu are maintaining their data in a proper way and other States are also requested to come out with this work. Sh. A.R. Rao, Director (Development), Union Ministry of Shipping informed that data is available with NIOT. Shri Poonawala, CW&PRS, informed that their data is not available free of cost; it is very costly. Also, the data available with IMD or NIOT is different from which is required by the State authorities for anti-erosion works. Shri Poonawala informed that CW&PRS, Pune organized a course for technical officers of the States for this

purpose, but all the States could not participate in the workshop. During the workshop, participating officers did not express any difficulty in collecting the data. Jt. Director, CW&PRS, informed the CPDAC that the proposal of establishing Coastal Data Bank has been approved during X Plan. Chairman, CPDAC, was of the view that the State Govts should be motivated to collect the data by putting a condition of data collection as one of the pre-requisites for sanctioning the funds, so that States should take it seriously. Secretary, NWRWS, Gujarat, asked if some funds could be arranged by the Centre for the collection of data. Chairman, CPDAC, asked the member-States to send their proposals for collection of data, which can be submitted to the Govt. of India/INCH for consideration, but pending that State Govts. should make sincere efforts for collecting the data and send it to CWPRS.

Representative of GSI informed that the studies on both onshore and off-shore (10 metres depth) may be integrated for a meaningful study of the coastal zone. Representative of GSI informed that in selected sectors, GSI has carried out certain studies and further study can be taken in any area specifically identified. Chairman, CPDAC, said that the States can approach Dy. Director General, GSI, Marine Wing, Kolkata for such studies whenever required.

(Action: Maritime States & UTs)

6.4 TO ORGANISE GENERAL INVESTIGATION, STUDIES AND RESEARCH WITH THE HELP OF CENTRAL AND STATE ENGINEERING RESEARCH INSTITUTIONS.

6.4.1 RESEARCH PROPOSALS

Member States were requested to prepare research proposals for consideration and funding from INCH, INCOH, etc. It was decided to launch website on CPDAC wherein all research activities relating to coastal engineering may be incorporated.

Regarding the status of the two research proposals submitted by the Govt. of Tamil Nadu to INCH, Director, IHH, Poondi, Tamil Nadu informed that one proposal has not been considered while second proposal is in final stage of approval.

(Action: Maritime States & UTs/ CPDAC Secretariat)

6.4.2 SATELLITE IMAGERIES TO MONITOR SHORELINE CHANGES.

Chief Engineer, A&N Islands, informed that he had requested Space Application Centre, Ahmedabad, for acquiring the coastal maps, but he has not yet received some of the maps. Shri A.S. Rajawat, Scientist SF, SAC, informed the Committee that remaining maps would be made available soon. Director, IHH, Poondi, Tamil Nadu, informed the CPDAC that they have acquired some of the

imageries from National Remote Sensing Agency (NRSA), Hyderabad, for monitoring the estuarine morphological dynamics.

Member States may approach Space Application Centre for obtaining coastal data and NRSA for Satellite Imageries to monitor the shoreline changes.

(Action: Maritime States & UTs)

6.4.3 COASTAL ATLAS

The matter related to preparation of coastal atlas was discussed in detail, particularly with reference to the contents of the atlas, the amounts sanctioned so far and time schedule for preparing the atlas. It was informed to the CPDAC that similar works have been done for Kutch region. Shri Rajawat, SAC, Ahmedabad, also informed that an atlas was prepared using digital database in Geographic Information System (GIS). Shri Rajawat showed the maps to the Committee. He emphasized that the proposed work for the atlas would be on similar lines and would include the existing land use, land cover and shore line change maps and the additional information to be provided by the States in a format to be decided by the sub-committee formed for this purpose. The sub-committee consists of Shri Shailesh Nayak, Gr. Director, SAC as convenor and Director, Beach Erosion, CWC, Kochi as Member-Secretary and Director, Coastal Erosion Directorate, CWC, representative of NIO, Goa & Director, GSI (marine wing) as members. It was decided that this sub-committee should also include representative from Survey of India. It was decided that this committee should meet at the earliest to discuss and finalize the proposal of preparation of coastal atlas, including contents, time schedule and budgetary aspects in detail.

Chairman, CPDAC, informed that an amount of Rs. 1.0 crore has been approved by the Govt. of India for preparation of coastal atlas. Shri Rajawat informed that the total estimated cost is Rs.2.87 crores and efforts are being made to arrange the remaining budget through Department of Space. It was informed by the representative that in view of the constraints of funds, coastal atlas is being prepared for some maritime States in the first phase, and the remaining maritime states/UTs can be covered later on. Secretary, NWRWS, Gujarat, suggested that coastal atlas should be got prepared covering all the maritime States/UTs. The Committee agreed to this suggestion. Chairman, CPDAC suggested to prepare Coastal Atlas as early as possible including all maritime States/UTs. Time frame for preparation of Coastal Atlas may be finalized in the meeting of sub-committee.

Representative of GSI asked whether in the proposed Atlas, which is being developed by the SAC, NHO charts or Survey of India topo-sheets to be taken into consideration as maps on scale 1,50,000 or 1,25,000 are not continuously available throughout the coast. Chairman, CPDAC said that the sub-committee may take into consideration this point also. GSI representative informed that the characteristics of the sediments in the coastal area should be integrated in the Atlas. Shri Rajawat, SAC, informed that although it is very difficult proposal, but wherever possible, the sediment characteristics can be taken into consideration. Chairman, CPDAC asked whether any financial provision can be made for the preparation of the Atlas from

GSI side. GSI representative said that he cannot commit anything on this. This may be referred to Director-General, GSI.

Tamilnadu representative suggested to include wave height and period in Coastal Atlas. Shri Rajawat, SAC, informed that if this data is available, it can be digitized and included in the Atlas.

(Action: SAC, Ahmedabad / Beach Erosion Dte./ CPDAC Secretariat)

6.4.4 STRENGTHENING THE FACILITIES FOR COASTAL ENGINEERING BY THE STATES.

A supplementary list of mathematical models in the field of coastal engineering received from CWPRS, Pune was circulated for benefit of the member-States as decided in the 5th meeting. All State/central departments are requested to bring to knowledge of CPDAC any information relating to coastal engineering, which may be beneficial for member States/UTs.

(Action: All State/Central Departments)

6.5 TO LAY DOWN PRINCIPLES IN CONSTRUCTION TECHNIQUES OF COASTAL PROTECTION MEASURES FOR THE GUIDANCE OF STATE AUTHORITIES.

It has already been decided during the review of functions of CPDAC to form a sub-committee for bringing out a manual for execution of coastal protection works incorporating guidelines for preparation of estimates, construction techniques, etc.

Shri R. Sundar Raju, S.E., PWD, Pondicherry expressed difficulty in procuring stone boulders from neighbouring State Tamilnadu for construction of RMS wall in Pondicherry. Tamilnadu authorities may look into the matter.

(Action: CPDAC Secretariat/ CWPRS/ concerned State)

6.6 TO REVIEW THE PERFORMANCE OF THE WORKS CARRIED OUT BY THE STATES AND EVOLVE IMPROVED DESIGN TECHNIQUES BASED ON SUCH EXPERIENCE FROM TIME TO TIME.

As decided during the review of functions of CPDAC, a sub-committee for performance evaluation of coastal protection works will be formed. Sub-committee may visit sites in maritime States/UTs time to time and submit its report.

6.6.1 MODIFICATION IN THE DESIGN OF SEA WALL.

A brief presentation was made by the representative of WRO, PWD, Govt. of Tamil Nadu, about the erosion problem, protection measures, and coastal features of Tamil Nadu State. Director (Ports), Pondicherry also made a presentation on erosion problem in Pondicherry.

6.6.2 PREPARATION OF INDIAN SHORE PROTECTION MANUAL.

A manual on “Protection and Control of Coastal Erosion in India” was published by National Institute of Oceanography (NIO), Goa in 1980. It was decided in the meeting to request NIO, Goa to furnish the updated copies of the manual for circulation to the Member States/UTs.

In the meeting, need to develop a website on CPDAC was felt. It was decided to approach NIC to launch a website on CPDAC, which will contain all information pertaining to CPDAC. The extracts from the manual of NIO may be made available on this website. CPDAC Secretariat will initiate the development of website in association with CW&PRS.

(Action: CPDAC Secretariat)

6.7 NATIONAL COASTAL PROTECTION PROJECT (NCP) FOR SEEKING EXTERNAL ASSISTANCE.

It was informed during the meeting that a consolidated report for the National Coastal Protection Project (Phase-I), estimated to cost 1095.911 crores, has been prepared and submitted to Ministry of Water Resources in December 2002, incorporating proposals of the states of Karnataka, Maharashtra, West Bengal, Tamil Nadu, Orissa and UT of Pondicherry.

Chairman, CPDAC, requested the remaining maritime States/UTs (Andhra Pradesh, Goa, Gujarat, Kerala, and UTs of Andaman & Nicobar Islands & Lakshadweep) to expedite finalization of their NCP proposal so that consolidated National Coastal Protection Project (Phase-II) can be prepared and submitted to Union Ministry of Water Resources.

(Action: Maritime States)

6.8 TO INTERACT WITH NATIONAL/INTERNATIONAL AGENCIES ENGAGED IN THE WORK OF COASTAL PROTECTION AND TECHNOLOGY TRANSFER IN THE FIELD OF COASTAL PROTECTION.

It was decided to interact with international agencies engaged in coastal protection works through Internet. Chairman suggested that CW&PRS can present

new technology or latest developments taking place in this field in the CPDAC meetings in future.

(Action: CWPRS)

6.8.1 TRAINING

Jt. Director, CW&PRS informed that CW&PRS have already conducted some courses, and would be conducting some training courses in the near future. Jt. Director, CW&PRS requested maritime States/UTs to come forward for training programme. Chief Engineer, A&N Islands, informed that they would be in touch with CW&PRS for this purpose. Sh. S. K. Sengupta, Chief Engineer (M&ERO), CWC, Bhubaneswar, requested CWPRS to conduct training programme in the States/UTs for the convenience of State officers. Jt. Director, CW&PRS informed that CWPRS can do so if required by the States/UTs. However, it will be more fruitful to arrange training programme at CWPRS since model studies/research activities can be shown at CWPRS only.

All the member States were requested to arrange training courses for their officers on coastal processes, protection measures, etc., either through CW&PRS, Pune, or through some academic institutions or through any other Central/State agencies from time to time.

(Action: Maritime States/CWPRS)

6.9 NEW ACTIVITIES ASSIGNED TO THE CPDAC

It has been decided during the review of function of CPDAC to constitute a sub-committee to work out short-term and long-term plans (Master Plan) for coastal protection. Representative of Gujarat proposed to take up preparation of plan for Gujarat. Other States are also requested to submit their plans to this sub-committee for review.

(Action: Beach Erosion Dte, CWC/Maritime States)

6.10 COMPOSITION OF CPDAC

For preparation of a panel for selecting non-official members, bio-data of officers were received only from the States of Tamil Nadu, Kerala, Orissa and Maharashtra. It was decided by the CPDAC to select the following persons as non-official members of CPDAC. It was decided to get their consent before recommending their names to the MoWR for inclusion as non-official members.

1. Shri Kale, Jt. Director (Retd.), CW&PRS.
2. Shri Vallam Sundar, Professor, IIT, Chennai.
3. Smt. A. Komalavalli Amma, Chief Engineer (Retd), Kerala.

(Action: CPDAC Secretariat)

6.11 STATUS OF COASTAL PROTECTION WORKS IN MARITIME STATES

Chairman, CPDAC, requested maritime States/UTs to send present status of coastal protection works to the CPDAC Secretariat in the prescribed format circulated by the CPDAC Secretariat. This information is required for replying to Parliament Questions/VIP References, etc.

(Action: Member States & UTs)

6.12 SCOPE FOR MANGROVE PLANTATION

Chairman, CPDAC, asked to put information on “Mangroves in India” received from CWPRS, Pune on proposed website on CPDAC.

(Action: CPDAC Secretariat/CWPRS)

6.13 CREATION OF SEPARATE COASTAL ENGINEERING DIVISION

At present coastal protection works are carried out by the irrigation department, PWD, etc., and generally officers carrying out the coastal protection works are frequently transferred. Chairman, CPDAC insisted that there should be separate circle/engineering division in each of the maritime States so as to develop expertise in the field of coastal engineering. The officers posted in this circle/engineering division should not be frequently transferred. Other Member States also agreed with the views of Chairman, CPDAC.

(Action: Maritime States/UTs)

6.14 STABIPLAGE TECHNOLOGY

Capt. R. Mohan, Director (Ports), informed that they were facing severe problem of sea erosion at Ullal. Many experts came and gave their views. Lot of protection works were taken up like beach nourishment, pumping of sands, even that was washed away. Gabion boxes also did not stand. French Govt. offered to take up restoration work with Stabiplate Technology and offered one-third grants for the work. This proposal was approved by the State Govt. Stabiplate is a French technology, developed by M/s. Groupe Espace, for restoring beaching affected by erosion and their preservation. Capt. R. Mohan, Director of Ports & Inland Water Transport, Karnataka, informed the Committee that a Minister from Karnataka State along with Secretary, PWD, Karnataka, visited France recently in connection with this project. A brief report of the visit was sent to the Ministry of Water Resources. A proposal for execution of pilot project to implement Stabiplate technology has been submitted to Department of Economic Affairs (DEA) for clearance.

6.15 KALPASAR PROJECT (GUJARAT)

Sh. B.M. Rao, Addl. Secretary & Chief Engineer, NWRWS & Kalpasar Deptt., Gujarat, informed the CPDAC that the Govt. of Gujarat is planning to develop Gulf of Kambhat project, named Kalpasar, which envisages construction of 64 kms long dam across the gulf to provide benefits of irrigation, reclamation, water supply, tidal power generation, road transport route link, port and fisheries development, etc. He informed that they have carried out the studies through international agencies and have made out pre-feasibility studies and some specific special studies have also been carried out to explore the economic viability and technical feasibility. Gulf of Cambay has one of the best sites for tidal power generation and it has very heavy current also. It is technically feasible. Estimated cost of the project is Rs. 54,000 crores. Shri Rao, Director (Development), Ministry of Shipping, asked them to give a copy of the pre-feasibility report for their information. A presentation, highlighting the salient features of Kalpasar project was made for the information and benefit of CPDAC members. Chairman, CPDAC thanked Shri Rao for the presentation, and wished that Gujarat will be able to implement this ambitious project which will bring prosperity to the State.

6.16 ANY OTHER ITEM WITH THE PERMISSION OF CHAIR

Recommendation nos. 190 to 207 made by National Flood Commission on cyclone and sea erosion were circulated to member States/UTs for their comments. However, no reply was received from any of State/UT. Shri Bibhas Kumar, Director (MP-II), Ganga Flood Control Commission (GFCC), Patna, informed the CPDAC that one committee was formed under the Chairmanship of Shri R. Rangachari to review the recommendations of the National Flood Commission. The report has come out in the year 2003. He informed that since the report has already come out, no further action seems to be taken. Hence, it was decided to drop this item.

6.17 VENUE OF THE NEXT MEETING

Chairman, CPDAC, requested members present from the States/UTs to volunteer for next meeting of CPDAC. Shri M.S. Patel, Secretary, NWRWS Deptt., Gujarat, agreed to host the next meeting in Gujarat. Chairman, CPDAC, thanked Shri Patel for agreeing to host the next meeting. CPDAC Secretariat may fix a date and venue of the 7th CPDAC meeting in consultation with him.

(Action: CPDAC Secretariat/Gujarat)

Other Presentations

Shri K. Sreenivas, Regional Manager, Garware-Wall Ropes Ltd., Chennai, made a technical presentation on coastal protection using geo-synthetic products. The company manufactures a wide range of products, which include polymer gabions/mattresses for shore/bank protection works. He also requested the representatives of maritime States/UTs for any information/clarification on this technology, which they are using in India for the last 5-6 years successfully.

In the end, Chairman, CPDAC, and other delegates thanked Shri P.P. Srinivasan, Chief Engineer, Sh. R. Sundar Raju, S.E., PWD, Pondicherry and his team of dedicated officers and staff for hosting the 6th CPDAC meeting at Pondicherry, and making excellent arrangements for the participants. Chairman, CPDAC, also thanked all the participants for their valuable contributions in making this meeting successful.

The meeting ended with a vote of thanks to the Chair.

Site Visit:

As a part of the 6th CPDAC meeting, participants visited site near the new port area in Pondicherry, in the morning of 8th April 2004 to have on the spot observation of the sea-erosion problems. Director (Ports), Pondicherry gave brief idea of dredging the inlet channel and sand trap and pumping the sediments to the coast, north of the breakwaters, thereby nourishing the coast artificially. The delegates had also a look at a 240 metres sub-marine tunnel. The delegates also visited Old Port area and Gandhi Square where a lot of erosion has taken place and coastal protection work need strengthening.

List of participants of 6th CPDAC Meeting held at Pondicherry is given at **Annex-I.**

Annexure-1**Participants of 6th CPDAC Meeting**

Sl. No.	Name and designation
1.	Sh. M.K. Sharma, Chairman, CPDAC & Member (RM), CWC & ex-officio Addl. Secretary to Govt. of India, Sewa Bhawan, R.K. Puram, New Delhi-110 066
2.	Sh. S.C. Awasthy, Member-Secretary, CPDAC & Chief Engineer (P&D), CWC, Sewa Bhawan, R.K. Puram, New Delhi-110 066
3.	Dr. T.G. Antony Balan, Chief Engineer (C&SR), CWC, Coimbatore (Tamil Nadu)
4.	Sh. S. K. Sengupta, Chief Engineer (M&ERO), CWC, Bhubaneswar (Orissa)
5.	Sh. Devendra Sharma, Director (CED), CWC, Room No. 823(N), Sewa Bhawan, R.K. Puram, New Delhi-110 066
6.	Sh. J. Chandrashekhar Iyer, Director (Beach Erosion), CWC, Cochin (Kerala)
7.	Sh. Bhupesh Kumar, Deputy Director (CED), CWC, Room No. 806(N), Sewa Bhawan, R.K. Puram, New Delhi-110 066
8.	Sh. I.Z. Poonawala, Jt. Director, CW&PRS, Pune
9.	Sh. A.R. Rao, Director (Development), Ministry of Shipping, Transport Bhawan, New Delhi-110 001
10.	Sh. A. Muralidharan, Research Officer (WR), Planning Commission, Yojna Bhawan, New Delhi-110 001
11.	Sh. M.S. Patel, Secretary (WR), Narmada, Water Resources, Water Supply & Kalpasar Deptt., Sachivalaya, Gandhi Nagar (Gujarat)
12.	Sh. B.M. Rao, Additional Secretary & Chief Engineer (Kalpasar), NWRWS & Kalpasar Deptt., Gujarat.
13.	Sh. D.H. Patel, S.E., Central Designs Orgn., NWR&WS Deptt., Gandhi Nagar, (Gujarat)
14.	Sh. Ananda Subudhi, Chief Engineer & Basin Manager, Rushikulya, Vansadhara & Nagavali Basin, Deptt. of Water Resources, Berhampur, Ganjam, Orissa.

15.	Capt. R. Mohan, Director of Ports & Inland Water Transport, Uttara Kannada, Baithkol, Karwar, (Karnataka)
16.	Sh. G. C. Khattar, Chief Engineer, APWD, Andaman & Nicobar Islands, Port Blair-744 101
17.	Sh. K. Veluchamy, Director, Institute of Hydraulics & Hydrology, Poondi – 602 023 (Tamil Nadu).
18.	Sh. M. Jayapalan, Deputy Director, Hydraulics Division, Tamil Nadu.
19.	Sh. R. Sampath, Dy. Director, Central Schemes Division, WRO, PWD, Design Research & Construction Support, Chennai-5
20.	Sh. G.P. Mohapatra, Geologist (Sr.), Geological Survey of India, Marine Wing, 90, Kirlampudi, Visakhapatnam-530 017 (Andhra Pradesh)
21.	Cdr. G.S. Inda, Jt. Director of Hydrography, Ministry of Defence (Navy), Directorate of Hydrography, West Block IV, Wing – 5, R. K. Puram, New Delhi-110 066.
22.	Sh. Bibhas Kumar, Director (MP-II), Ganga Flood Control Commission, Patna-800 015
23.	Sh. A.S. Rajawat, Scientist SF, Earth Sciences & Hydrology Division, Marine & Water Resources Group, Space Application Centre, Ahmedabad-380 053 (Gujarat)
24.	Sh. P.P. Srinivasan, Chief Engineer, PWD, Pondicherry
25.	Sh. R. Sundar Raju, S.E., PWD, Pondicherry
26.	Sh. B. Ramkumar, Director (Ports), Pondicherry
27.	Sh. S. Attakoya, S.E., Lakshadweep.

**No.4/5/2004-CED/
Government of India
Central Water Commission
Coastal Erosion Directorate**

806(N), Sewa Bhavan,
R.K. Puram, New Delhi-110 066
Dated the April, 2004

To

**Subject: 6th Meeting of Coastal Protection & Development Advisory
Committee (CPDAC) – Forwarding of Minutes – reg.**

The undersigned is directed to enclose a copy of minutes of the 6th meeting of Coastal Protection And Development Advisory Committee (CPDAC) held on 7th April 2004 at Pondicherry. Your comments, if any, may kindly be communicated at the earliest. It is also requested to take follow-up action on the items concerning your State/Department, and send a report in this regard to this office at the earliest.

Yours faithfully,

Encls : As above.

(Devendra Sharma)
Director
Tel./ Fax No. 26195513

List of Members of CPDAC

- | | |
|--|---|
| 1 Member (R M)
C.W.C.,
2 nd floor, Sewa Bhawan,
R.K.Puram, New Delhi-66. | 2 Chief Engineer (P&D),
C.W.C.,
815(N), Sewa Bhawan,
R.K. Puram, New Delhi-66. |
| 3 Commissioner (PP),
Ministry of Water Resources,
Shram Shakti Bhawan, Rafi Marg,
New Delhi-110001 | 4 Advisor (I & CAD),
Planning Commission,
Yojna Bhawan, Sansad Marg,
New Delhi-110001. |
| 5 Advisor/Joint Secretary
(Impact Assessment)
Ministry of Environment & Forests,
6 th Floor, Paryavaran Bhawan,
CGO Complex, Lodhi Road,
New Delhi-110003. | 6 Development Advisor (Ports),
537,Transport Bhawan,
Ministry of Surface Transport,
1, Parliament Street,
New Delhi- 110011. |
| 7 Engineer-in-Chief (Irrigation)
Irrigation & CAD Department,
Errum Manzil,
Hyderabad - 500 082
(Andhra Pradesh) | 8 Member Agriculture,
State Planning Commission,
Govt. of Tamil Nadu,
Ezhilagam, Chepauk,
Chennai - 600005. |
| 9 Chief Engineer (C&SRO),
C.W.C.,
Sangamam,
Gandhimaanagar, Peelamedu P.O.,
Coimbatore – 641 004
(Tamil Nadu) | 10 Chief Engineer (Irrigation),
2 nd Floor, Junta House,
Annexe, Panaji- 403001.
(Goa). |
| 11 Director,
National Institute of Oceanography,
Dauna-Paula,
Goa- 403001. | 12 Secretary (WR),
Narmada, Water Resources &
Water Supply Department,
Govt. of Gujarat,
Block No. 9, Sardar Bhawan,
Sachivalaya,
Gandhinagar- 382010.
(Gujarat) |

- | | |
|---|--|
| <p>13 Chief Engineer,
Irrigation&Admn.,
Govt. of Kerala,
Thiruvananthapuram- 695033
(Kerala)</p> | <p>14 Director,
Central Water & Power
Research Station (CWPRS),
P.O. Khadakwasla,
Pune - 411024.
(Maharashtra)</p> |
| <p>15 The Chief Executive Officer,
(Commissioner, Water Transport)
Maharashtra Maritime Board,
Indian Mercantile Chamber (3rd Floor)
Ramajibhai Kamani Marg,
Ballard Estate,
Mumbai - 400 038.
(Maharashtra)</p> | <p>16 Engineer-in-Chief
(Water Resources),
Secha Sadan,
Govt. of Orissa,
Bhubaneswar - 751001.
(Orissa)</p> |
| <p>17 Deputy Director General,
Geological Survey of India,
Marine Wing,
Bhu-Vigyan Bhawan
DK – 6, Sector – 2,
Salt Lake City,
Kolkata - 700091
(West Bengal)</p> | <p>18 Secretary,
Irrigation & Waterways Deptt.,
Govt. of West Bengal,
Jalsampad Bhawan, Salt Lake,
Calcutta- 700091.
(West Bengal)</p> |
| <p>19 Shri Shailesh Nayak,
Head, Marine and Water Resources
Division,
Space Application Center,
Ambawadi Vistar P.O.,
Ahmedabad –380015</p> | <p>20 Chief Hydrographer,
National Hydrographic Office,
17 A, Rajpur Road
Dehradun-248001</p> |
| <p>21 Chief Engineer, APWD,
Andaman & Nicobar Administration,
Port Blair-744101</p> | <p>22 Superintending Engineer
PWD,
Kavaratti –682 555,
Lakshadweep.</p> |
| <p>23 Chief Engineer, PWD,
34, Lal Bahadur Shastri Street,
Pondicherry-605001</p> | <p>24 Member (Planning),
Ganga Flood Control
Commission,
Sinchai Bhawan 3rd Floor,
Patna – 800015.</p> |

- 25 Director (Ports & I.W.T.),
Baithkol, Uttara Kannada,
Karwar – 581302
Karnataka.

Other Participants:

- | | |
|--|--|
| 26 Sh. S.K. Sengupta,
Chief Engineer,
Mahanadi & Eastern Rivers, CWC,
Plot No.655, Sahid Nagar,
Bhubaneswar-751007
(Orissa) | 27 Director,
Institute of Hydraulics &
Hydrology,
Poondi – 602 023.
(Tamil Nadu) |
| 28 Director,
Beach Erosion Directorate,
Central Water Commission,
"Jaladhara", 27/1927-A,
Kasturba Nagar, Kochu-Kadavanthra,
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Cochin - 682 020 | 29 Sh. A.R. Rao,
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| 30 Shri R. Sundarraju
Superintending Engineer,
Buildings & Roads, Circle-1,
Public Works Department,
Pondicherry - 605 001. | 31 Sh. I.Z. Poonawala
Jt. Director,
Central Water & Power
Research Station (CWPRS),
P.O. Khadakwasla,
Pune - 411024.
(Maharashtra) |
| 32 Sh. B.M. Rao,
Additional Secretary &
Chief Engineer (Kalpasar),
Narmada, Water Resources,
Water Supply & Kalpasar Department
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Block No. 8, 7 th Floor
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Gandhinagar – 382 010 | 33 Cdr. G.S. Inda,
Jt. Director of Hydrography,
Ministry of Defence (Navy),
Directorate of Hydrography,
West Block IV, Wing – 5,
R. K. Puram,
New Delhi-110 066. |

- 34 Sh. A.S. Rajawat, Scientist SF,
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Marine & Water Resources Group,
Space Application Centre,
Ahmedabad-380 053 (Gujarat)
- 35 Sh. G.P. Mohapatra,
Geologist (Sr.),
Geological Survey of India,
Marine Wing,
90, Kirlampudi,
Visakhapatnam-530 017
(Andhra Pradesh)
- 36 Sh. Ananda Subudhi,
Chief Engineer & Basin Manager,
Rushikulya, Vansadhara &
Nagavali Basin,
Department of Water Resources,
Berhampur, Ganjam,
(Orissa).